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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,791	02/27/2004	Sophia W. Kao	RZMI-P321	9433
32986	7590	08/10/2006	EXAMINER	
IPSG, P.C. P.O. BOX 700640 SAN JOSE, CA 95170-0640			ROSE, HELENE ROBERTA	
			ART UNIT	PAPER NUMBER
			2163	

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/789,791	<b>Applicant(s)</b> KAO, SOPHIA W.	
	<b>Examiner</b> Helene Rose	<b>Art Unit</b> 2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on February 27, 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**Detailed Action**

1. Claims 1- 22 have been presented for examination.
2. Claims 1-22 have been rejected.

**Claim Rejections – 35 USC § 112**

3. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22, recite 35 USC 112, sixth paragraph “means for” language. The examiner is unable to determine what disclosed structure provides the corresponding means for performing the recited function for the following claim limitations: “a means for performing a search operation”, “a means for accessing a stored action group number corresponding to each hit resulting from the search operation”, “a means for checking if group subfields in the stored action group number are enabled for any hits from the search”, “a means for allowing the hit for a group if the group subfield is enabled”, “a means for suppressing the hit for the group if the group subfield is not enabled”, “a means for determining a precedence to provide a search result for the group” and “a means for selecting an action from an action table portion corresponding to the group”.

Claim Rejections – 35 USC - 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheriton (US Patent No. 7,002,965/Filing Date of Patent: May 21, 2001) in view of Brown et al. (US Patent No. 5,875,446/Date of Patent: February 23, 1999).

Claim 1:

Regarding Claim 1, Brown teaches wherein an action group arbitration system, comprising:

a search block having a first type memory portion and a second type memory portion, wherein the search block is configured to provide a search result in response to a search key (Figure 10, all features, Brown);

a first table having stored values (Figure 6B, all features, Brown) and configured to receive the search result and to provide a selection signal in response to the search result having a first state and an associated stored value having an enable state (column 11, lines 49-55, Brown); and

Brown discloses all the limitations above. However, Brown does not disclose wherein a second table configured to receive the selection signal and to provide an action indication. However, Cheriton discloses wherein a second table configured to receive the

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selection signal and to provide an action indication (column 1, lines 63-67, Cheriton). It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate a selection signal and action indicator disclosed by Cheriton within Brown system, for the method of classifying packets to produce results.

Claims 2 and 16:

Regarding Claim 2, the combination of Brown in view of Cheriton teaches wherein the first type memory portion includes static random access memory (SRAM) (Column 3, lines 28-30, Cheriton).

Claims 3 and 17:

Regarding Claim 3, the combination of Brown in view of Cheriton teaches wherein the second type memory portion includes ternary content addressable memory (TCAM) (Column 3, lines 14-17, Cheriton).

Claim 4:

Regarding Claim 4, the combination of Brown in view of Cheriton teaches wherein the first and second type memory portions include a plurality of entries (Column 3, lines 5-8, Cheriton).

Claim 5:

Regarding Claim 5, Cheriton teaches wherein for each of the plurality of entries, an entry in the first table includes a plurality of the stored values (Figure 4, diagrams 402, 403, 404, and 405, Cheriton).

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Claim 6:

Regarding Claim 6, the combination of Brown in view of Cheriton teaches wherein each of the stored values corresponds to an action group (columns 3-4, lines 66-67 and line 1, Cheriton).

Claim 7:

Regarding Claim 7, the combination of Brown in view of Cheriton teaches wherein the first state includes a hit or match indication (column 5, lines 19-23 and column 6, lines 36-38, Cheriton).

Claim 8:

Regarding Claim 8, the combination of Brown in view of Cheriton teaches wherein the second table includes an action table having a plurality of portions (see abstract, wherein second stage one or more CAMS (Cheriton).

Claim 9:

Regarding Claim 9, the combination of Brown in view of Cheriton teaches wherein each of the plurality of portions is configured to be accessed by a corresponding one of a plurality of the selection signals (column 7, lines 16-21 and Figure 4, diagrams 406, Cheriton).

Claim 10:

Regarding Claim 10, the combination of Brown in view of Cheriton teaches wherein each of the plurality of portions corresponds to an action group (column 2, lines 37-43 and column 4, lines 4-15, Cheriton).

Claim 11:

Regarding Claim 11, the combination of Brown in view of Cheriton teaches wherein the action group includes a user programmable register for enabling one or more categories of actions (column 2, lines 54-67 and column 4, lines 4-15, Cheriton).

Claim 12:

Regarding Claim 12, the combination of Brown in view of Cheriton teaches wherein the selection signal is generated in response to a precedence determination (column 4, lines 16-26, Cheriton).

Claim 13:

Regarding Claim 13, the combination of Brown in view of Cheriton teaches wherein the action indication includes an action to be performed on a packet (Figure 4, all features, Cheriton).

Claims 14 and 22:

Regarding Claims 14 and 22, the combination of Brown in view of Cheriton teaches performing a search operation (see abstract, Brown);

accessing a stored action group number corresponding to each hit resulting from the search operation (column 1, lines 38-41, Brown);

checking if group subfields in the stored action group number are enabled for any hits from the search operation (column 11, lines 43-46, Brown);

allowing the hit for a group if the group subfield is enabled (column 11, lines 49-55);

suppressing the hit for the group if the group subfield is not enabled (columns 3-4, lines 65-67 and lines 1-2, Brown);

determining a precedence to provide a search result for the group (Figure 10, diagram 615, Brown); and

selecting an action from an action table portion corresponding to the group (column2, lines 54-55, Brown).

Claim 15:

Regarding Claim 15, the combination of Brown in view of Cheriton teaches wherein the performing the search operation includes searching a block having a first type memory portion and a second type memory portion (column 1, lines 44-47 and lines 65-67, Cheriton).

Claim 18:

Regarding Claim 18, the combination of Brown in view of Cheriton teaches wherein the accessing the stored action group number includes selecting an entry from an action group number table (column 1, lines 40-41, Brown).

Claim 19:

Regarding Claim 19, the combination of Brown in view of Cheriton teaches wherein the determining the precedence includes selecting a highest priority hit from among a remaining group of hits (Figure 11, diagram 705, Brown).

Claim 20:

Regarding Claim 20, the combination of Brown in view of Cheriton teaches wherein the action table includes a portion corresponding to each of the groups (Figure 8, diagrams 415 and 450 and 455, Brown).



Claim 21:

Regarding Claim 21, the combination of Brown in view of Cheriton teaches wherein the selecting the action from the action table includes accessing the portion corresponding to the group (column 4, lines 57-63, Brown).

**Prior Art of Record**

1. Cheriton (US Patent No. 7,002,965) discloses methods and apparatus are disclosed herein for classifying packets using ternary and binary content-addressable memory stages to classify packets.
2. Hunter et al (US Patent No. 6,223,172) disclose a method and apparatus for efficiently performing a longest match search.
3. Brown et al (US Patent No. 5,875,446) disclose relevant objects in an object database are first identified using any generally known methods to obtain a set of topically relevant objects.

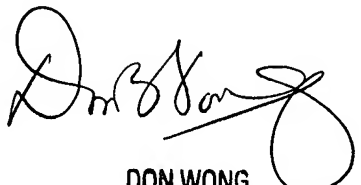
**Point of Contact**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Rose whose telephone number is (571) 272-0749. The examiner can normally be reached on 8:00am - 4:30pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Helene Rose  
Technology Center 2100  
August 4, 2006



DON WONG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100